

**ABSTRACT OF THE DISCLOSURE**

A data processing system is provided with an instruction (ADD8TO16) that unpacks non-adjacent portions of a data word using sign or zero extension and  
5 combines this with a single-instruction-multiple-data type arithmetic operation, such as an add, performed in response to the same instruction. The instruction is well suited to use within systems having a data path (2) including a shifting circuit (6) upstream of an arithmetic circuit (8).

10 [Figure 1.]

09041750-083001  
T00000-052460